HABITAT USE BY BLACKBIRDS DURING SPRING MIGRATION: IMPLICATIONS FOR A SPRING BAITING PROGRAM

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Introduction

Mixed-species flocks of blackbirds, commonly including red-winged blackbirds (*Agelaius phoeniceus*), common grackles (*Quiscalus quiscula*), and yellow-headed blackbirds (*Xanthocephalus xanthocephalus*), are well known for their ability to damage crops such as rice, corn, and sunflower. In the northern Great Plains, blackbird damage to sunflower has intensified as the production of commercial sunflower has increased (Linz and Hanzel 1997). In an effort to reduce damage, researchers have been working with an avicide designed to reduce blackbird populations over the entire sunflower growing region. Successful baiting during spring migration requires a knowledge of the habitats used by blackbirds during this period of time.

Methods

In order to determine habitat use by migrating blackbirds, habitat use surveys were conducted during the spring of 1998. In the area surrounding the Arlington (T110N R52W S10), Colman (T106N R51W S8) DeSmet (T111N R56W S27), and Ramona (T107N R55W S13) roosts in eastern South Dakota, two observers recorded the number, species, behavior, and habitat used for all blackbirds observed in specified quadrats during morning and evening survey periods. The number of blackbirds and the number of flocks in each habitat type were calculated. In addition, the amount of each habitat available in the study area was determined using the nonmapping technique described by Marcum and Loftsgarden (1980).

Results

A total of 482 flocks containing 189,691 blackbirds were observed. The majority of these birds (38.2% of the birds and 50.2% of the flocks) were observed in windbreaks, shelterbelts, and woodlots (Table 1). While this suggests that trees are an important habitat for migrating blackbirds, less than 1% of the blackbirds observed in windbreaks, shelterbelts, and woodlots were feeding (Table 2). Feeding birds and flocks were most commonly found in corn, pasture, and cultivated habitats. These three habitat categories accounted for 95.7% of the feeding blackbirds, and 91.7% of the feeding flocks observed. These data suggest that corn, pasture, and cultivated habitats are important feeding areas for blackbirds in the study area.

Conclusions

Blackbirds were commonly found feeding in corn, pasture, and cultivated areas. In addition, blackbirds were often observed in and around windbreaks, shelterbelts, and woodlots. In order for spring baiting to be successful, we recommend that bait be placed in corn and other cultivated areas which are located near trees.

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Literature Cited

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Table 1. Spring habitat used by migrating blackbirds in eastern South Dakota.

Habitat Class	Number of Blackbirds Observed		Number of Flocks Observed		Proportion of Habitat Type Available in Study Area
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	
Grass	3,560	1.9%	3	0.6%	10.9%
Pasture	31,615	16.7%	54	11.2%	18.3%
Wetlands	6,110	3.2%	32	6.6%	10.1%
Corn	49,405	26.0%	107	22.2%	24.5%
Trees	72,428	38.2%	242	50.2%	3.9%
Cultivated	24,885	13.1%	29	6.0%	28.5%
Miscellaneous	1,688	0.9%	15	3.2%	3.8%
Total	189,691	100%	482	100%	100%

Table 2. Spring feeding habitat used by migrating blackbirds in eastern South Dakota.

Habitat Class	Number of Blackbirds Observed		Number of Flocks Observed		Proportion of Habitat Type Available in Study Area
	Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency	
Grass	3,560	3.3%	3	1.5%	10.9%
Pasture	29,039	26.6%	51	24.9%	18.3%
Wetlands	276	0.3%	4	2.0%	10.1%
Corn	49,260	45.0%	106	51.7%	24.5%
Trees	90	0.1%	1	0.5%	3.9%
Cultivated	26,385	24.1%	31	15.1%	28.5%
Miscellaneous	677	0.6%	9	4.4%	3.8%
Total	109,287	100.0%	205	100.0%	100%